

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Currently Amended) A process for making a metal-polymer composite suitable for shaping into food and beverage container end panels and container bodies, comprising:
 - a. applying to a metal sheet a coating top layer comprising a fully polymerized or nearly fully polymerized polymer selected from the group consisting of polyolefins, anhydride-modified polyolefins, epoxies, and phenoxies; and
 - b. scissioning polymer chains in said polymer by irradiating said coating top layer, wherein irradiating said top layer comprises directly exposing the top layer to radiation, wherein said irradiating is carried out at a sufficient energy and for a sufficient time to sufficiently embrittle said polymer in said coating top layer thereby to improve resistance of said coating top layer to feathering and angel hair formation.
2. (Original) The process of claim 1 wherein said metal sheet comprises a metal selected from the group consisting of aluminum alloys, steel, aluminum alloy-coated steel, and aluminum-coated steel.
3. (Original) The process of claim 1 wherein said metal sheet comprises aluminum alloy of the AA3000 or AA5000 series.
4. (Original) The process of claim 1 wherein said polymer comprises a polyolefin selected from

the group consisting of polypropylene, polyethylene, propylene-ethylene copolymers, propylene-1-hexene copolymers, and mixtures thereof.

5. (Original) The process of claim 1 wherein said polymer comprises a polyolefin selected from the group consisting of polypropylene and copolymers comprising propylene and up to about 50 mole percent of a co-monomer.

6. (Original) The process of claim 1 wherein said polymer comprises a polyolefin modified with an anhydride selected from the group consisting of maleic anhydride, citraconic anhydride, itaconic anhydride, glutaconic anhydride, 2,3-dimethylmaleic anhydride, and mixtures thereof.

7. (Original) The process of claim 1 wherein said polymer comprises a polyolefin modified with about 0.5-20 weight percent maleic anhydride, based on the weight of the polyolefin.

8. (Currently Amended) The process of claim 1 wherein the step of applying the polymer ~~coating~~ top layer to the metal sheet comprises extrusion coating, roll coating, or laminating.

9. (Original) The process of claim 1 wherein the step of irradiating comprises irradiating at a dosage of about 2-20 megarads.

10. (Cancelled)

11. (Currently Amended) The process of claim 1 wherein said polymer in said coating top layer is fully cured before said step of irradiating.

Claims 12 – 14. (Cancelled)

15. (Original) The process of claim 1 further comprising d. before step a., conversion coating a surface portion of said metal sheet.

16. (Currently Amended) A process for making an aluminum-polymer composite suitable for shaping into container end panels having improved resistance to feathering and angel hair formation, comprising:

a. applying to an aluminum alloy sheet a cured polymer coating top layer comprising a fully polymerized maleic anhydride modified polyolefin, said polyolefin being selected from the group consisting of polypropylene and copolymers comprising propylene and up to about 50 mole percent of a co-monomer, thereby to form an aluminum-polymer composite;

b. scissioning chains in said maleic anhydride modified polyolefin by irradiating the cured polymer coating top layer on said composite, wherein irradiating the cured polymer top layer comprises directly exposing the top layer to radiation, wherein said irradiating sufficiently embrittles said polymer coating top layer thereby to improve resistance of coating the top layer to feathering and angel hair formation; and

c. shaping said composite into a container body or container end panel;

wherein step b. is performed before step c.

17 – 18 (Cancelled).

19. (Currently Amended) A process for making a metal-polymer composite suitable for shaping into food and beverage container end panels and container bodies, comprising:

a. applying to a metal sheet a coating top layer comprising a fully polymerized or nearly fully polymerized polymer selected from the group consisting of polyolefins, anhydride-modified polyolefins, epoxies, and phenoxies.

b. scissioning polymer chains in said polymer by irradiating said coating top layer, wherein irradiating said top layer comprises directly exposing the top layer to radiation, wherein said irradiating is carried out for a sufficient time to embrittle said polymer in said coating top layer, thereby to improve resistance of said coating top layer to feathering and angel hair formation; and

c. shaping said composite into a container body or container end panel;

wherein step b. is performed before step c.

20. (Currently Amended) A process for making a metal-polymer composite suitable for shaping into food and beverage container end panels and container bodies, comprising:

a. applying to a metal sheet a coating top layer comprising a fully polymerized or nearly fully polymerized polymer selected from the group consisting of polyolefins, anhydride-modified polyolefins, epoxies, and phenoxies.;

b. embrittling said polymer in said coating top layer, thereby to improve resistance of said coating top layer to feathering and angel hair formation wherein embrittling said polymer comprises directly exposing the fully polymerized or nearly fully polymerized polymer to radiation.